

Audiometric Testing

WAC 296-817-400

Summary

YOUR RESPONSIBILITY:

To conduct audiometric testing of employees exposed to noise to make sure that their hearing protection is effective

You must

Provide audiometric testing at no cost to employees
WAC 296-817-40005 400-2

Establish a baseline audiogram for each exposed employee
WAC 296-817-40010 400-2

Conduct annual audiograms
WAC 296-817-40015 400-3

Review audiograms that indicate a standard threshold shift
WAC 296-817-40020 400-4

Keep the baseline audiogram without revision, unless annual audiograms indicate a persistent threshold shift or a significant improvement in hearing
WAC 296-817-40025 400-5

Make sure a record is kept of audiometric tests
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Make sure audiometric testing equipment meets these requirements
WAC 296-817-40035 400-7





Audiometric Testing

WAC 296-817-400

Rule

WAC 296-817-40005

Provide audiometric testing at no cost to employees

You must

- Provide audiograms, including any required travel or necessary additional examinations or testing, at no cost to exposed employees.

WAC 296-817-40010

Establish a baseline audiogram for each exposed employee

You must

- Conduct a baseline audiogram when an employee is first assigned to work involving noise exposures that equal or exceed 85 dBA TWA₈.
 - Make sure this audiogram is completed no more than 180 days after the employee is first assigned
- OR**
- Make sure employee is covered by a hearing protection audit program (as described by WAC 296-817-500 and available as an alternative only for employees hired for less than one year).



Note:

Employers who utilize mobile test units are allowed up to one year to obtain a valid baseline audiogram for each exposed employee. The employees must still be given training and hearing protection as required by this chapter.

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Audiometric Testing

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Rule

WAC 296-817-40010 (Continued)

You must

- Make sure employees aren't exposed to workplace noise at least fourteen hours before testing to establish a baseline audiogram.
 - Hearing protectors may be used to accomplish this.
- Notify employees of the need to avoid high levels of nonoccupational noise exposure (such as loud music, headphones, guns, power tools, motorcycles, etc.) during the 14-hour period immediately preceding the baseline audiometric examination.

WAC 296-817-40015

Conduct annual audiograms

You must

- Conduct annual audiograms for employees as long as they continue to be exposed to noise that equals or exceeds 85 dBA TWA₈.



Note:

Annual audiometric testing may be conducted at any time during the work shift. By conducting the annual audiogram during the work shift with the employee exposed to typical noise for their job, the test may record a temporary threshold shift. This makes the test more sensitive to potential hearing loss and may help you improve employee protection before a permanent threshold shift occurs. A suspected temporary shift is one reason an employer may choose to retest employee hearing.

You must

- Make sure each employee is informed of the results of his or her audiometric test.
 - Include whether or not there has been a hearing level decrease or improvement since their previous test.

-Continued-





Audiometric Testing

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Rule

WAC 296-817-40015 (Continued)

You must

- Make sure each employee's annual audiogram is compared to his or her baseline audiogram by an audiologist, otolaryngologist, another qualified physician, or the technician conducting the test to determine if a standard threshold shift has occurred.
 - If the annual audiogram indicates that an employee has suffered a standard threshold shift, you may obtain a retest within 30 days and consider the results of the retest as the annual audiogram.
- Make sure that an audiologist, otolaryngologist, or other qualified physician sees any annual audiogram that indicates a standard threshold shift.

WAC 296-817-40020

Review audiograms that indicate a standard threshold shift

You must

- Make sure the health care professional supervising audiograms has:
 - A copy of this chapter
 - The baseline audiogram and most recent audiogram of the employee to be evaluated
 - Background noise level records for the testing room
 - Calibration records for the audiometer.
- Obtain an opinion from the health care professional supervising audiograms as to whether the audiograms indicate possible occupational hearing loss and any recommendations for changes in hearing protection

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Rule



WAC 296-817-40020 (Continued)

You must

- Pay for any clinical audiological evaluation or otological examination required by the reviewer, if:
 - Additional review is necessary to evaluate the cause of hearing loss
- **OR**
- If there is indication of a medical condition of the ear caused or aggravated by the wearing of hearing protectors.
- Inform the employee in writing of the existence of a standard threshold shift within 21 calendar days of the determination.
- Make arrangements for the reviewer to communicate to the employee any suspected medical conditions that are found unrelated to your workplace. This information is confidential and must be handled appropriately.

WAC 296-817-40025

Keep the baseline audiogram without revision, unless annual audiograms indicate a persistent threshold shift or a significant improvement in hearing

You must

- Keep the baseline audiogram without revision, unless a qualified reviewer determines:
 - The standard threshold shift revealed by the audiogram is persistent
- **OR**
- The hearing threshold shown in the annual audiogram indicates significant improvement over the baseline audiogram.



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WAC 296-817-40030

Make sure a record is kept of audiometric tests

You must

- Retain a legible copy of all employee audiograms conducted under this chapter.
 - Make sure the record includes:
 - Name and job classification of the employee
 - Date of the audiogram
 - The examiner's name
 - Date of the last acoustic or exhaustive calibration of the audiometer
 - Employee's most recent noise exposure assessment
 - The background sound pressure levels in audiometric test rooms.

Audiometric Testing

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Rule

WAC 296-817-40035

Make sure audiometric testing equipment meets these requirements

You must

- Use pure tone, air conduction, hearing threshold examinations, with test frequencies including as a minimum 500, 1000, 2000, 3000, 4000, and 6000 Hz
 - Tests at each frequency must be taken separately for each ear
 - Supra-aural headphones must be used.
- Conduct audiometric tests with audiometers (including microprocessor audiometers) that meet the specifications of, and are maintained and used according to, American National Standard Specification for Audiometers, S3.6-1996
- Check the functional operation of the audiometer each day before use by doing all of the following:
 - Make sure the audiometer's output is free from distorted or unwanted sound
 - Test either a person with known, stable hearing thresholds or a bio-acoustic simulator
 - Perform acoustic calibration for deviations of 10 dB or greater.
- Audiometer calibration must be checked acoustically at least annually to verify continued conformance with ANSI S3.6-1996. Test frequencies below 500 Hz and above 6000 Hz may be omitted from this check
- An exhaustive calibration must be performed at least every 2 years according to the American National Standard Specification for Audiometers, S3.6-1996. Test frequencies below 500 Hz and above 6000 Hz may be omitted from the calibration.

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Audiometric Testing

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Rule

WAC 296-817-40035 (Continued)

You must

- Provide audiometric test rooms that meet the requirements of ANSI S3.1-1999 American National Standard Maximum Permissible Ambient Noise Levels for Audiometric Test Rooms using the following table of maximum ambient sound pressure levels:

Table 4

Maximum Ambient Sound Pressure Levels

Frequency (Hz)	500	1000	2000	4000	8000
Sound Pressure Level (dB)	40	40	47	57	62



Note:

The American Industrial Hygiene Association and National Hearing Conservation Association recommend conducting audiograms using the requirements of ANSI S3.1-1999 American National Standard Maximum Permissible Ambient Noise Levels for Audiometric Test Rooms, with adjustments at only 500 Hz and below.